

(12) UK Patent Application (19) GB (11) 2 075 820 A

(21) Application No 8007921

(22) Date of filing 8 Mar 1980

(43) Application published
25 Nov 1981

(51) INT CL³
A42B 3/00

(52) Domestic classification
A3V 11D 16

(56) Documents cited
GB 485873

(58) Field of search
A3V

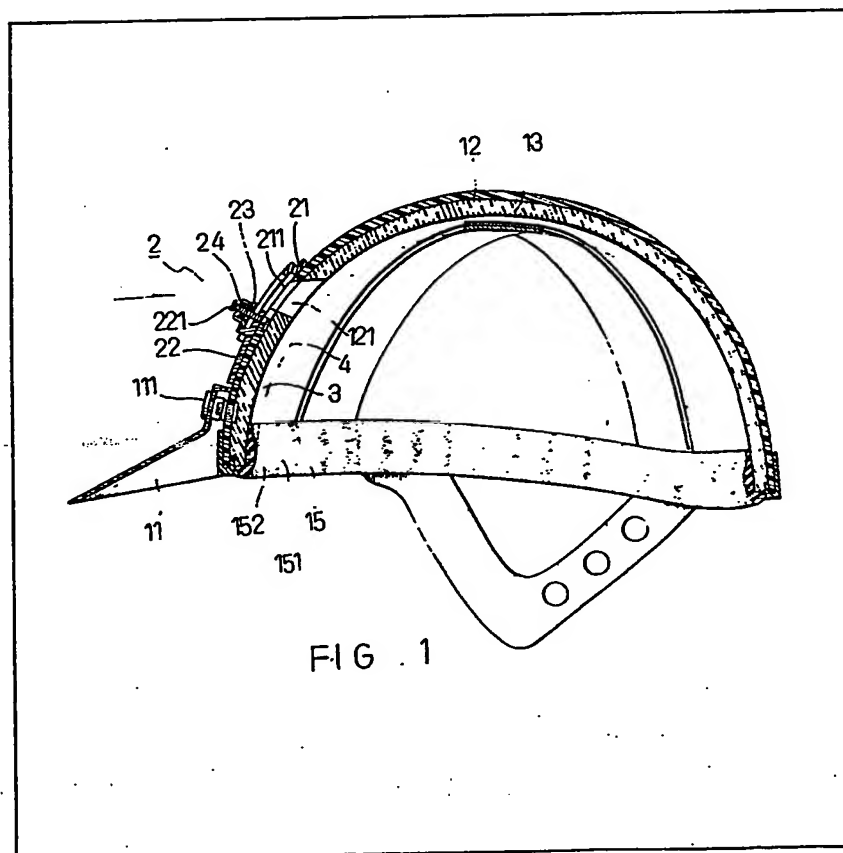
(71) Applicants
Shu-Chen Liu,
34, 57 Alley,
Minchu Road,
Tainan City,
Taiwan.

(72) Inventors
Shu-Chen Liu

(74) Agents
E.N. Lewis & Taylor,
144 New Walk,
Leicester, LE1 7JA.

(54) A safety helmet provided with
ventilative device

(57) A safety helmet having an air-inlet
(2), the opening and closing of which
can be controlled, and a spacer pad (15)
which provides for space between the
safety helmet and the wearer's head
and provides for the passage for the air
inside the safety helmet to escape out-
side.



GB 2 075 820 A

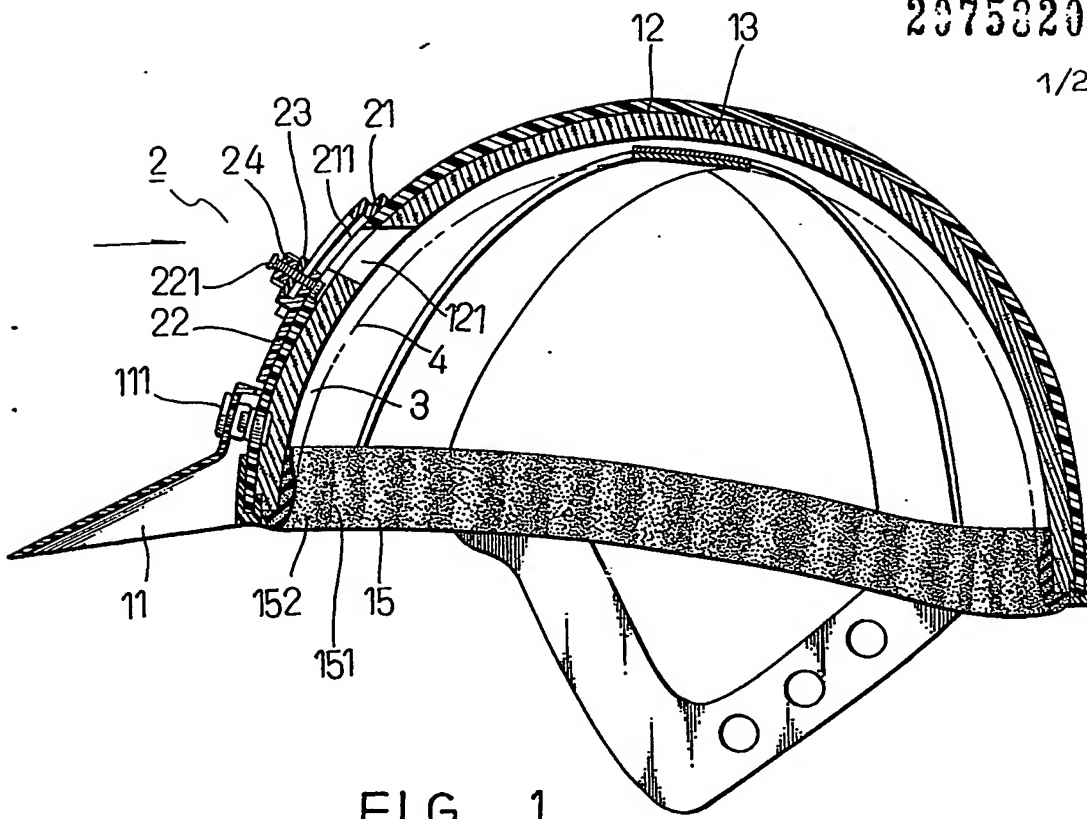


FIG. 1

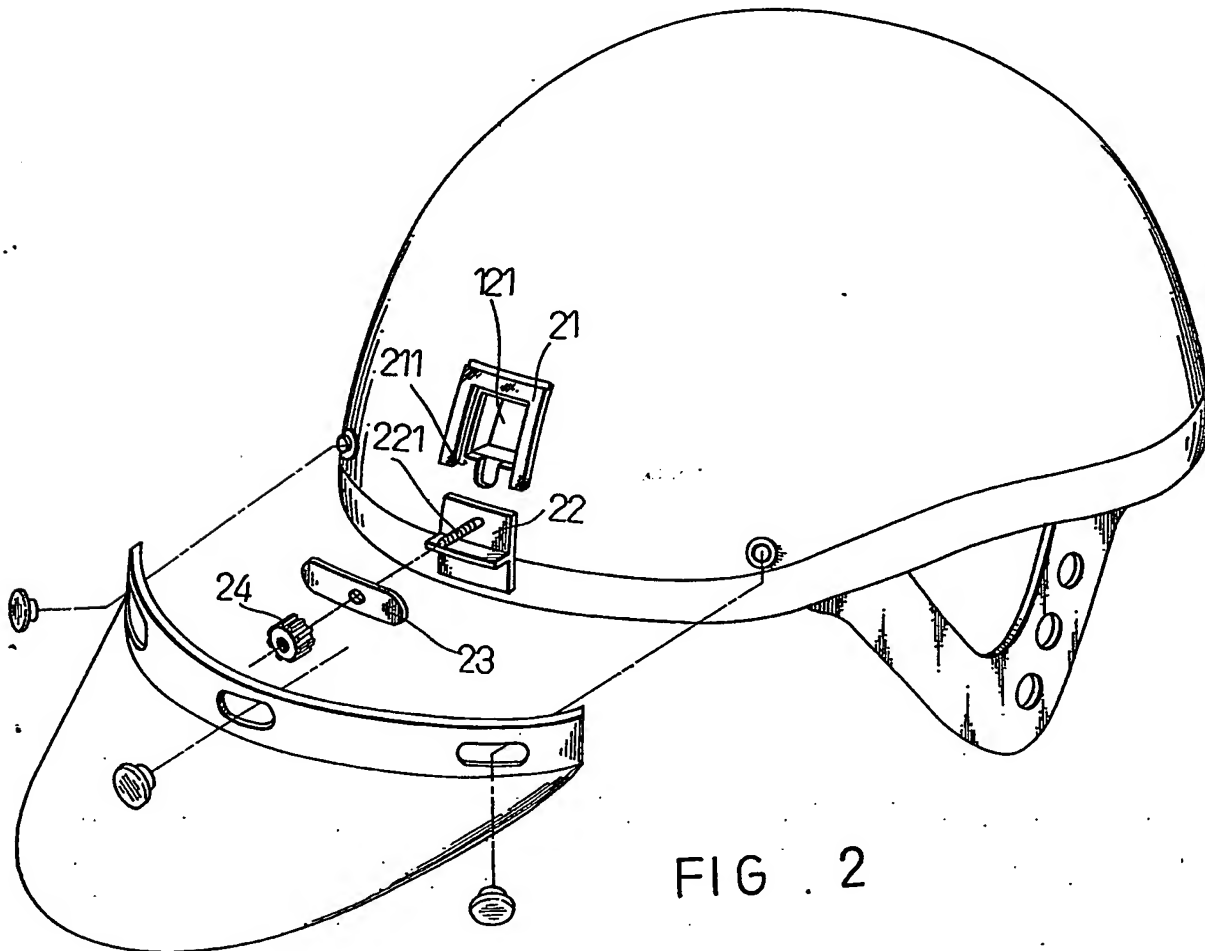


FIG. 2

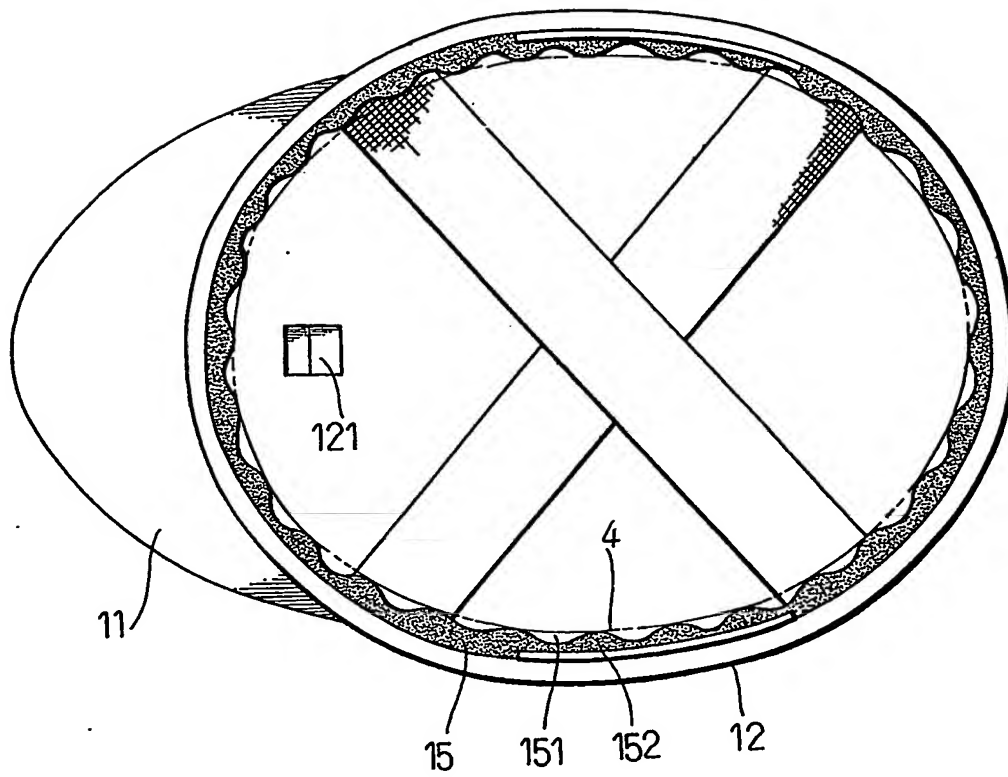


FIG . 3

SPECIFICATION

A safety helmet provided with ventilative device

5 This invention relates to a safety helmet provided with ventilative device to be used in many fields such as firefighting, constructing work, police work, sports, particularly to be worn by motorcycle drivers.

Most conventional helmets are not provided with both simple and efficient ventilative devices. Consequently, the wearer easily feels dizzy and uncomfortable because of the rigid and heavy structure of the safety helmet.

In view of the above, one object of the present invention is to provide a safety helmet having an air-inlet of simple and practical structure to let the air flow into the helmet.

Another object of the present invention is to provide a safety helmet having a spacer pad adequately positioned and shaped to provide space inside the safety for the air to circulate and provide passage for the air to escape outside the helmet.

These and other objects and advantages of the invention will become more apparent from the following detailed description of the preferred embodiment of the present invention with reference to the accompanying drawings, wherein:

Figure 1 is a sectional view of the safety helmet in accordance with the present invention;

Figure 2 is an exploded perspective view of the air-inlet device on the safety helmet in accordance with the present invention; and

Figure 3 is a bottom view of the safety helmet in accordance with the present invention.

Referring to Figure 1, a helmet in accordance with the present invention embodies such conventional structures as a hard outer protective shell 12 which conforms to the contour of the wearer's head and which has its lower surface laminated with a form-fitting headgear protective liner 13; a visor 11 secured on the helmet by a fastening means 111 and a band 14 for fixing the helmet on the head of the wearer.

The characteristics of the present invention lie in an air-inlet device 2 (Figures 1 and 2) and a spacer pad 15 (Figures 1 and 3). The air-inlet device 2 comprises primarily an opening 121, a frame body 21, a cover piece 22, a screw bolt 221, a screw cap 24 and a fixing plate 23. The opening 121 is square-shaped, positioned above the visor 11 and penetrates through the outer shell 12 as well as the inner liner 13. Along the three borders of the opening 121 is provided a continuous frame body 21. On the frame body 21 is provided a continuous groove 211 along said three borders of the opening 121 to receive respective borders of the cover piece 22. The cover piece 22 is adapted to slide along the groove 211 to cover the opening 121 and has its shape generally correspond to that of the opening 121. A screw bolt 221 has its one end vertically secured on the cover piece 22 below the middle of the border of the cover piece 22 which when the cover piece 22 slides along the groove 211 to cover the opening 121 shall meet the part of the frame body 21 opposing the border of the opening 121 not lined with the

frame body 21. A fixing plate 23 has its central hole pierced through by the screw bolt 221 and has its length determined to let each end thereof cover the adjacent parts of frame body 21 when accompanying the cover piece 22 to slide along the groove 211. Following the fixing plate 23, a screw nut 24 is engaged to the screw bolt 221.

The fixing plate 23 is to coordinate with the frame body 21 to fix the position of the cover piece 22 between the groove 211 by screwing the screw nut 24 downwardly to press the fixing plate 23 closely onto the frame body 21. When it is intended to let fresh air come inside the helmet, the screw nut 24 can be screwed upwards to release its pressure on the cover piece 22 and the cover piece 22 can be slid to disclose the opening 121. When the screw bolt 221 accompanying the cover piece 22 slides near the border of the opening 121 not lined with the frame body 21, the cover piece 22 is fixed by screwing the screw nut 24 downwardly to press each end of the fixing plate 23 closely onto the frame body 21. In case of rain, snow or any condition wherein the wearer wishes to cover the opening 121, the screw nut 24 can be likewise screwed upwards to release its pressure on the fixing plate 22 and the cover plate 22 can be slid to cover the opening 121, then the position of the cover piece 22 can be fixed by screwing the screw nut 24 downwardly to press the cover piece 23 onto the frame body 21.

The spacer pad 15 is a strip of flexible material provided along the lower peripheral edge portion of the helmet. The spacer pad 15 has fair thickness and ripple surface to touch the head 4 of the wearer. The thickness of the spacer pad 15 at the crest top of its ripple surface exceeds the thickness of the helmet wall so that the spacer pad 15 shall coordinate with the liner 13 to define a space 3 between the helmet wall and the wearer's head 4 for air-circulation. Meanwhile, the trough 151 of the ripple surface serves as the passage for the air inside the helmet to escape outside. It is to be noted that the spacer pad 15 shall cause no discomfort to the wearer because of its fair thickness and flexibility.

As the present invention may be embodied in several forms without departing from the spirit of essential characteristics thereof, the present embodiment is therefore illustrative and not restrictive. The scope of the invention shall be defined by the appended claims.

CLAIMS

1. A safety helmet having:
 - an opening positioned above the visor of said safety helmet and allowing the air to flow inside said safety helmet;
 - a cover piece movably secured to said safety helmet and able to cover and disclose said opening; and
 - a spacer pad provided along the lower peripheral edge portion thereof and able to let the air inside said safety helmet escape outside through the passage defined between itself and the wall of said safety helmet.
2. A safety helmet as claimed in claim 1 wherein

said spacer pad has ripple surface to touch the head of the wearer, the thickness thereof at the crest top of said ripple surface being exceeding the thickness of the wall of said safety helmet, the trough of said ripple surface serving as said passage for the air inside said safety helmet to escape outside.

3. A safety helmet as claimed in claim 1 wherein along an appropriate length of said opening is provided a frame body which has a continuous groove along said length of said opening, the groove being adapted to receive a length of border of said cover piece to slide therein;

a screw bolt has its one end vertically secured on said cover piece adjacent the length of said border of said cover piece which when sliding to cover said opening shall meet the length of said frame body opposing the length of the border of said opening not lined with said frame body;

a fixing plate has its central hole pierced through by said screw bolt, the length thereof being determined to let each end thereof cover the adjacent part of said frame body when said cover piece sliding along said groove on said frame body when said cover piece sliding along said groove on said frame body;

a screw nut is engaged to said screw bolt following said fixing plate and is able to be screwed downwards to press each end of said fixing plate to press onto adjacent part of said frame body.